

Claims

1. A transdermal therapeutic system comprising an active substance
5 impermeable backing layer, at least one polymer layer with microreservoirs
present therein, and at least one active substance, and a protective layer
for removal before use, wherein
10 a) the polymer fraction of the polymer layer consists to the
extent of at least 70% by weight, preferably at least 80% by
weight, of polysiloxanes,
b) the microreservoirs contain the active substance in dissolved
form,
c) the solvent for the active substance consists to the extent of
15 at least 50% by weight, preferably at least 80% by weight, of
an ambiphilic, especially dipolar organic solvent, and
d) the ambiphilic solvent is soluble in polysiloxane to the extent
of not more than about 20% by weight and is preferably
20 miscible with water at least in a weight ratio of one part of
solvent to 3 parts of water.

2. The transdermal therapeutic system as claimed in claim 1, wherein the
polysiloxane is amine-resistant.

3. The transdermal therapeutic system as claimed in claim 1 or 2, wherein
25 following production the microreservoirs are essentially free from water.

4. The transdermal therapeutic system as claimed in one or more of
claims 1 to 3, wherein the polysiloxane is self-adhesive and if desired
comprises at least one filler.

30

5. The transdermal therapeutic system as claimed in one or more of
claims 1 to 4, wherein the microreservoir-containing layer is provided at
least with one further self-adhesive layer, which is microreservoir-free, for
anchoring on the skin and/or for anchoring with the backing layer.

35

6. The transdermal therapeutic system as claimed in one or more of
claims 1 to 5, wherein the ambiphilic solvent is liquid at room temperature,

judiciously has a boiling point under standard conditions of more than 80°C, in particular more than 110°C, is preferably diethylene glycol monoethyl ether, diethylene glycol dimethyl ether, one of the butanediols, tetrahydrofurfuryl alcohol, dipropylene glycol, propylene glycol or a mixture

5 thereof, and is judiciously soluble to the extent of not more than 20% by weight in n-hexane or n-heptane.

7. The transdermal therapeutic system as claimed in one or more of claims 1 to 7, wherein the boiling point of the dipolar solvent is above that

10 of the solvent for the polysiloxane, judiciously at least 10°C, preferably at least 30°C.

8. The transdermal therapeutic system as claimed in one or more of claims 1 to 7, wherein the maximum size of the microreservoirs does not

15 exceed 80% of the thickness of the polymer layer, the microreservoirs having a diameter of on average 5 - 50 μm , preferably 5 - 30 μm .

9. The transdermal therapeutic system as claimed in one or more of claims 1 to 8, wherein the microreservoirs comprise, in addition to the

20 active substance and the ambiphilic solvent, a crystallization inhibitor, a viscosity-increasing agent and/or a pH regulator.

10. A process for producing polysiloxane films charged with active substance microreservoirs, which comprises dissolving the active

25 substance in an ambiphilic solvent consisting to the extent of at least 50% by weight of dipolar organic solvents, dispersing this solution in a solution of a polysiloxane, coating the resulting dispersion onto an appropriate film, and removing the solvent of the polysiloxane at temperatures of between 25 and 100°C, preferably between 30 and 80°C.

